


nitrosamine;

wherein said flow of air is sufficient to avoid an anaerobic condition around the vicinity of said plant portion.

~~2~~¹3. (new) The process of claim ~~62~~¹, wherein the air is heated to a temperature of from about 100°F to about 250°F.

~~3~~²4. (new) The process of claim ~~63~~², wherein the temperature is from about 160°F to about 170°F.

~~4~~¹5. (new) The process of claim ~~64~~¹, further comprising converting said plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

 ~~5~~¹6. (new) A process of substantially preventing the formation of at least one nitrosamine in a Virginia flue tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a Virginia flue tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of nitrosamines arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of said at least one nitrosamine;

wherein said controlled environment comprises a flow of air sufficient to avoid an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

~~6~~⁵7. (new) The process of claim ~~66~~⁵, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

~~7~~⁶8. (new) The process of claim ~~67~~⁶, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

8/9. (new) The process of claim ~~5~~ 60, wherein the air is heated to a temperature of from about 100°F to about 250°F.

9/10. (new) The process of claim ~~8~~ 69, wherein the temperature is from about 160°F to about 170°F.

10/11. (new) The process of claim ~~5~~ 70, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

11/12. (new) A process of substantially preventing the formation of N'-nitrosonornicotine in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

heating at least a portion of a tobacco plant with a flow of air while said portion is uncured, yellow, and in a state susceptible to having formation of N'-nitrosonornicotine arrested, for a time sufficient to substantially prevent formation of N'-nitrosonornicotine;

wherein said flow of air is sufficient to avoid an anaerobic condition around the vicinity of said plant portion.

12/13. (new) The process of claim ~~11~~ 72, wherein the air is heated to a temperature of from about 100°F to about 250°F.

13/14. (new) The process of claim ~~12~~ 73, wherein the temperature is from about 160°F to about 170°F.

14/15. (new) The process of claim ~~11~~ 74, further comprising converting said plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

15/16. (new) A process of substantially preventing the formation of N'-nitrosonornicotine in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process

comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of N'-nitrosornicotine arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of N'-nitrosornicotine;

wherein said controlled environment comprises a flow of air sufficient to avoid an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

16 15
17. (new) The process of claim 76, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

B 17 16
18. (new) The process of claim 77, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

18 15
19. (new) The process of claim 76, wherein the air is heated to a temperature of from about 100°F to about 250°F.

19 18
20. (new) The process of claim 79, wherein the temperature is from about 160°F to about 170°F.

20 15
21. (new) The process of claim 76, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

21
22. (new) A process of substantially preventing the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

heating at least a portion of a tobacco plant with a flow of air while said portion is uncured, yellow, and in a state susceptible to having formation of 4-(N-nitrosomethylamino)-1-

44

B

(3-pyridyl)-1-butanone arrested, for a time sufficient to substantially prevent formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone;

wherein said flow of air is sufficient to avoid an anaerobic condition around the vicinity of said plant portion.

~~22~~ 83. (new) The process of claim ~~82~~ 21, wherein the air is heated to a temperature of from about 100°F to about 250°F.

~~23~~ 84. (new) The process of claim ~~83~~ 22, wherein the temperature is from about 160°F to about 170°F.

~~24~~ 85. (new) The process of claim ~~84~~ 23, further comprising converting said plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

~~25~~ 86. (new) A process of substantially preventing the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone;

wherein said controlled environment comprises a flow of air sufficient to avoid an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

~~26~~ 87. (new) The process of claim ~~86~~ 25, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

~~27~~ 88. (new) The process of claim ~~87~~ 26, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

²⁵
~~28~~ 29. (new) The process of claim ~~86~~²⁵, wherein the air is heated to a temperature of from about 100°F to about 250°F.

²⁸
~~29~~ 30. (new) The process of claim ~~89~~²⁸, wherein the temperature is from about 160°F to about 170°F.

²⁵
~~30~~ 31. (new) The process of claim ~~90~~²⁵, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

³¹
~~31~~ 32. (new) A process of substantially preventing the formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

heating at least a portion of a tobacco plant with a flow of air while said portion is uncured, yellow, and in a state susceptible to having formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine arrested, for a time sufficient to substantially prevent formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine;

wherein said flow of air is sufficient to avoid an anaerobic condition around the vicinity of said plant portion.

³¹
~~32~~ 33. (new) The process of claim ~~92~~³¹, wherein the air is heated to a temperature of from about 100°F to about 250°F.

³²
~~33~~ 34. (new) The process of claim ~~93~~³², wherein the temperature is from about 160°F to about 170°F.

³¹
~~34~~ 35. (new) The process of claim ~~94~~³¹, further comprising converting said plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

~~35~~ 96. (new) A process of substantially preventing the formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of N'-nitrosornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine;

wherein said controlled environment comprises a flow of air sufficient to avoid an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

~~36~~ 97. (new) The process of claim ~~35~~ 96, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

~~37~~ 98. (new) The process of claim ~~36~~ 97, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

~~38~~ 99. (new) The process of claim ~~35~~ 96, wherein the air is heated to a temperature of from about 100°F to about 250°F.

~~39~~ 100. (new) The process of claim ~~38~~ 99, wherein the temperature is from about 160°F to about 170°F.

~~40~~ 101. (new) The process of claim ~~35~~ 96, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

47

B

41
102. (new) A process of substantially preventing the formation of at least one nitrosamine in a Virginia flue tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a Virginia flue tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of nitrosamines arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of said at least one nitrosamine;

wherein said controlled environment comprises air free of combustion exhaust gases and an airflow sufficient to substantially prevent an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

B
42 41
103. (new) The process of claim 102, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

43 42
104. (new) The process of claim 103, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

44 41
105. (new) The process of claim 102, wherein the air is heated to a temperature of from about 100°F to about 250°F.

45 44
106. (new) The process of claim 105, wherein the temperature is from about 160°F to about 170°F.

46 41
107. (new) The process of claim 102, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

47
108. (new) A process of substantially preventing the formation of N'-nitrosonornicotine in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of N'-nitrosonornicotine arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of N'-nitrosonornicotine;

wherein said controlled environment comprises air free of combustion exhaust gases and an airflow sufficient to substantially prevent an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

B 48 47
109. (new) The process of claim 108, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

49 48
110. (new) The process of claim 109, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

50 47
111. (new) The process of claim 108, wherein the air is heated to a temperature of from about 100°F to about 250°F.

51 50
112. (new) The process of claim 111, wherein the temperature is from about 160°F to about 170°F.

52 47
113. (new) The process of claim 108, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

53

114. (new) A process of substantially preventing the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone in a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone;

wherein said controlled environment comprises a flow of air sufficient to avoid an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

54

115. (new) The process of claim 114, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

53

55

116. (new) The process of claim 115, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

54

56

117. (new) The process of claim 114, wherein the air is heated to a temperature of from about 100°F to about 250°F.

53

57

118. (new) The process of claim 117, wherein the temperature is from about 160°F to about 170°F.

56

58

119. (new) The process of claim 114, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.

53

59

120. (new) A process of substantially preventing the formation of N'-nitrosonornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine in

a harvested tobacco plant by treating the tobacco plant after the yellowing stage, the process comprising:

drying at least a portion of a tobacco plant, while said portion is uncured, yellow, and in a state susceptible to having the formation of N'-nitrosonornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine arrested, in a controlled environment and for a time sufficient to substantially prevent the formation of N'-nitrosonornicotine, 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone, N'-nitrosoanatabine, and N'-nitrosoanabasine;

wherein said controlled environment comprises air free of combustion exhaust gases and an airflow sufficient to substantially prevent an anaerobic condition around the vicinity of said plant portion;

wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.

60 59
121. (new) The process of claim 120, wherein the airflow is at least about 70 CFM at 1" static pressure per cubic foot of volume.

61 60
122. (new) The process of claim 121, wherein the airflow is at least about 80 CFM at 1" static pressure per cubic foot of volume.

62 59
123. (new) The process of claim 120, wherein the air is heated to a temperature of from about 100°F to about 250°F.

63 62
124. (new) The process of claim 123, wherein the temperature is from about 160°F to about 170°F.

64 59
125. (new) The process of claim 120, further comprising converting said dried plant portion into a tobacco product selected from the group consisting of cigarettes, cigars, chewing tobacco, snuff, gum, and lozenges.